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PROPAT, L.L.C. 425-C SOUTH SHARON AMITY ROAD CHARLOTTE, NC 28211-2841			DICUS, TAMRA	
			ART UNIT	PAPER NUMBER
			1774	
DATE MAILED: 07/16/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/084,028

Applicant(s)

MURSCHALL ET AL.

Examiner

Tamra L. Dicus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 14 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Acknowledgement is made of the RCE.

Response to Amendment

The claim objection over claims 1 and 2 are withdrawn due to Applicant's amendments.

The 103 rejection over U.S. Patent No. 6,521,351 to Murschall et al. in view of USPN 6,627,695 to Murschall et al. is withdrawn due to Applicant's statement of common ownership.

Claim Objections

Claim 10 is objected to because of the following informalities: Claim 10 has misspelled the compound with respect to "-5-ylmethyl)-" and "-oxo-2λ5-". The nomenclature is not correct.

Appropriate correction is required.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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4. Claims 1-6, 13, and 19 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 of U.S. Patent No. 6,521,351 to Murschall et al. in view of USPN 6,627,695 to Murschall et al.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the present claims differ only in the recitation of including a biaxially oriented film, a whiteness of 90% or greater, and a titanium dioxide. Murschall '351 claims the same total thickness range, opaque white film, UV stabilizers (equivalent to absorber), optical brightener, and soluble blue dye. Murschall '659 teaches a white biaxially oriented film that uses white pigments. The white pigments are provided to improve the whiteness of the film such pigments include both barium sulfate and titanium dioxide. This gives the film a brilliant white appearance. The concentration of barium sulfate or titanium dioxide is within the range from 1 to 25% by weight (within the same range as Applicant claims in instant claim 3). See col. 11, lines 15-55.

5. While Murschall '351 does not refer to a whiteness degree and does not use white pigment titanium dioxide, it would have been obvious to one of ordinary skill in the art to modify because Murschall '659 teaches using titanium dioxide and barium sulfate interchangeably to effect whiteness. Because the same weight percentage ranges of the aforesaid white pigments are the same range as Applicant, it would have been obvious to have a film exhibit a whiteness of 90% or greater.

6. While Murschall '351 does not refer to a white biaxially oriented film, Murschall '659 teaches a similarly constructed film that is biaxially oriented, providing how to stretch a white film to obtain such a property (col. 11, lines 45-55). It would have been obvious to one of

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ordinary skill in the art to modify the film of Murschall '351 to orient the film biaxially because Murschall '659 teaches it is conventional to do so.

7. To instant claim 5, Murschall '351 does not disclose a corona treatment to a film. However Murschall '659 teaches it is known to provide a corona treatment on the surface layer at col. 11, lines 50-55. It would have been obvious to one of ordinary skill in the art to modify the film of Murschall '351 to include a corona discharge to a film to provide a treatment as taught by Murschall '659 at col. 11, lines 50-55.

8. To instant claim 13, Murschall '351 does not teach regrind. Murschall '659 teaches regrind is included at col. 2, lines 50-55 as cut material to be reused. It would have been obvious to one of ordinary skill in the art to modify the material of Murschall '351 because Murschall '659 teaches regrind is cut material and reused that is included in white films. Moreover, the term "regrind" is a process-derived entity. Because it is of the same polyester material, the Examiner will regard it as such despite whether it was cut and reused, it is no different.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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9. Claims 1-4, 5, 13, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,436,219 to Francis in view of EP 0 942 031 A to Miki.

10. Francis teaches a white, opaque polyester film of PET that is biaxially oriented (col. 2, lines 40-55). See col. 3, line 1. The thickness shown in Francis is between Applicant's claimed range at col. 3, lines 65-col. 4, line 5 and col. 7, lines 25-35 as per instant claim 1. Rutile titanium dioxide is used as disclosed in col. 4, lines 50. The titania pigment is between 5 and 60% by weight as per instant claim 3. See col. 4, line 35-60. Optical brightener glycol is added at col. 6, lines 20-30 within 50 to 1500 ppm by weight and the polyester or PET includes polyethylene glycol as disclosed in col. 2, lines 10-40 (instant claim 21). Col. 7, lines 6-20 describe a 100 ppm of a blue dye, included in Applicant's instant claim 6 range between 10 to 10,000 ppm. Francis teaches modification of the surface of the primer layer e.g. by flame treatment, ion bombardment, electron beam treatment or preferably by corona discharge, may improve the adhesion at col. 9, lines 4-10 (instant claim 5). Further to amended claim 1, that white pigment consisting essentially of rutile-type titania Francis provides at col. 4, line 50.

Francis does not disclose a film exhibiting a light transmittance of up to 85% as instant claim 1 or the weight percentage by weight of a thermoplastic as instant claim 3. Francis does not disclose a whiteness percentage of 90% or more. Miki teaches a white polyester film, which is biaxially oriented. Miki provides a thickness of 188 microns in Table 1, falling within Applicant's claimed range as per instant claim 1. A white pigment is added such as rutile titania. See [0036] and [0068]. Example 1 provides a mixture of 13 wt. % of rutile titania, falling in Applicant's range as per instant claim 3. [0019] provides the polyester resins of instant claim 2. Miki provides a high whiteness value in Table 2. It would have been obvious to one of ordinary

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skill in the art to modify the film of Francis to include a thermoplastic, light transmittance of up to 85%, whiteness percentage, and wt % of whitener because Miki and Francis provide the same weight percentage range of white pigment inclusion with a thermoplastic as cited above. Further to instant claim 1, to the film exhibiting a light transmittance of up to 85% and whiteness of 90% or more, one would also expect the film to exhibit such properties as the same materials are provided for.

Francis does not teach an optical brightener of triazine derivative or the ppm amounts as per instant claim 4. Lai teaches this derivative at col. 9, lines 60-68 for improving heat and oxygen stability at col. 9, lines 40-68. It would have been obvious to one of ordinary skill in the art to modify the white film of Francis to include a triazine derivative for the purpose of improving heat and oxygen stability as taught by Lai at col. 9, lines 40-68. To the absence of the ppm amounts of instant claim 4, it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272. The weight percent effects the degree of oxygen stability or instability.

To instant claim 5, Francis discloses a corona treatment to a film as the preferred treatment at col. 9, lines 4-20 as a suitable modification.

To instant claim 13, Francis does not teach regrind. However, "regrind" is the same material and is a process-derived entity as described by Applicant in Arguments. Because it is of the same polyester material, the Examiner will regard it as such despite whether it was cut and reused-it is no different.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,436,219 to Francis in view of EP 0 942 031 A to Miki, as applied to claim 19 above, and further in view of USPN 4,460,674 to Uehara et al.

Francis is relied upon above. To amended claim 20, Francis does not teach 1, 4-bis-(butylamino)-anthraquinone dye. Uehara teaches a posi-type quinine photosensitive composition used in plastic films having dye additives. Uehara employs oil soluble dye Sudan Blue II by BASF to plastic films. Uehara does not refer to this dye as the compound 1, 4-bis-(butylamino)-anthraquinone. However, the compound 1, 4-bis-(butylamino)-anthraquinone is otherwise known as Sudan Blue II (by BASF) as is also the same dye as Applicant uses in the Specification (see page 7, line 9). It would have been obvious to one of ordinary skill in the art to modify the film of Francis to include 1, 4-bis-(butylamino)-anthraquinone because Uehara teaches this dye is commercially available and uses the dye on plastic films to impart a photosensitive functionality to the film (col. 5, lines 15-30 of Uehara).

Claims 5-7 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,436,219 to Francis in view of EP 0 942 031 A to Miki and further in view of USPN 4,415,684 to Lai et al., as applied above.

Francis is relied upon above. Francis does not teach a UV absorber or percentages of instant claims 5-7. Lai provides a UV-light-stable compositions having discovered an organic compound particularly a polymeric substrate such as a polyester, has uniformly dispersed therein, an effective amount of a polysubstituted 1,5-diazacycloalkane UV-light absorbing compound sufficient to make the organic compound UV light stable. See Lai, col. 3, lines 15-25. Various similar compounds are listed at col. 7, lines 1-20 and col. 8, lines 1-10. See also

Example 2 of Lai. It would have been obvious to one of ordinary skill in the art to modify the white film of Francis to include a UV absorber such as instant claims 5-7 because Lai teaches compounds such as these are used in polyester substrates to produce UV light stable substrates. Francis suggests using UV stabilizers as additives in polyester film (col. 9, line 56.). It would have been obvious to one of ordinary skill in the art to modify the percentage because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272. The weight percent effects the degree of UV stability or instability.

Francis does not teach a phenolic stabilizer or the percentages (instant claims 11-12). Lai teaches such compounds at col. 9, lines 25-68. It would have been obvious to one of ordinary skill in the art to modify the white film of Francis to include such stabilizers because Lai teaches adding such compounds achieve both UV light and oxygen stability as cited above. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272. The weight percent effects the degree of UV stability or instability.

Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,436,219 to Francis in view of EP 0 942 031 A to Miki and further in view of USPN 4,415,684 to Lai et al. and USPN 4,033,936 to Bollert et al., as applied to claims 1 and 5 above.

Francis is relied upon above. Francis does not disclose a flame retardant is an organic phosphorous such as carboxyphoshinic acid or anhdride as in instant claims 8 and 9. Bollert discloses a process for manufacture of flame retarding linear polyesters. Bollert teaches it is conventional to add carboxyphoshinic acids and other anhydrides to polyesters (polyethylene

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terephthalate (PET) is inclusive) at col. 1, line 65-col. 2, line 7 to provide flame retarding properties. Hence it would have been obvious to one of ordinary skill in the art to modify the white film of Francis to further include carboxyphosphonic acids and other anhydrides for the purpose of providing flame retarding properties as taught by Bollert at col. 1, lines 54-63.

While neither reference teaches the compound of claim 10, it would have been obvious to one of ordinary skill in the art to modify because Bollert provides a similar chemical structure of similar start-up phosphorous compounds at col. 1, lines 10-50, col. 3, and col. 4-col. 5.

Therefore, a reasonable expectation of success is founded in the prior art. *In re Vaeck*, 947 F.2d 488. See MPEP § 2143 - § 2143.03.

Response to Arguments

Applicant's arguments filed 04-15-04 have been fully considered but they are not persuasive.

Regarding the compound of instant claim 10, the nomenclature is still not correct. The use of the “λ” symbol is improper despite Applicant’s contentions toward being well known in the art. Within the STN (Scientific Technical Network) database of chemical abstracts registry, the incorrectly named compound is not found. This database contains over 26 million compounds and the way the Applicant spells the compound, the compound does not show up. Therefore, it cannot be well known. A similar compound was found without the “λ” symbol and the “5-ylmethyl” within the database (see the attached references marked “A” and “B”). If the spelling is within A and B references, the Applicant should refer to those spellings.

The Murschall references are still used in the Double Patenting rejection because Applicant has not provided a Terminal Disclaimer.

Applicant argues the prior art of record do not provide for the new limitations to a light transmittance of up to 85%, however, one would expect this transmittance percentage as the same materials are used, absent any evidence to the contrary. Applicant has not provided any objective evidence to disprove the evidence provided.

Applicant argues US 219 also does not teach or suggest white pigment consisting essentially of rutile-type titania. However, the rutile-type titania is not claimed as a blend. Further US 219 already teaches the use of rutile-type titania at col. 4, line 50. The prior art clearly discloses this type of titania and does not limit to just anatase-type titania. Either type, US 219 discloses the use of both.

Applicant argues the functionalities of the film, stating US 219 does not teach or suggest the use of a flame retardant or 1% by weight or more of polyethylene glycol. However, US 219 clearly teaches the use of polyethylene glycol at col. 2, line 22, which is considered as one and therefore falls within Applicants range of 1% by weight *or more*. The flame retardant of instant claim 5 Applicant argues is optionally claimed. Instant claim 5 also optionally claims corona-treating the film, which was originally provided for in the Office Action. See col. 9, lines 4-20. Regarding the flame retardant of instant claims 8-10, Applicant argues that US 219 does not teach. However, Bollert was used to teach the organic phosphorous compound flame retardant. Applicant alleges Bollert is completely silent to white polyester films. The Examiner does not use Bollert to provide this limitation, but Francis provides this limitation as previously set forth. See Francis adding titania, a white pigment, see col. 4, line 50. Bollert provides at col. 1, lines

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34-68 using organic phosphorous compounds such as carboxyphosphinic acids, in polyester films. Therefore, motivation exists to combine the two aforesaid references, thus the 103 is a proper rejection.

Applicant also argues EP 031 to the use of anatase and rutile type titania. Applicant alleges that because anatase-type is preferred, that a white pigment consisting essentially of rutile is not taught nor a whiteness of 90% or more. However, that anatase is preferred does not discount that rutile is suggested, which is all that is required for a prima face case. When the claimed and prior art products are identical or substantially identical in structure or are produced by identical or a substantially identical processes, a prima facie case of either anticipation of obviousness will be considered to have been established over functional limitations that stem from the claimed structure. *In re Best*, 195 USPQ 430, 433 (CCPA 1977), *In re Spada*, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). The *prima facie* case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed products. *In re Best*, 195 USPQ 430, 433 (CCPA 1977).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Applicant argues the combination due to US 219 directed to photographic substrates, EP 031 directed to low lead films and US 684 directed to UV stabilizers for polymeric

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substrates. Because all the prior art references are within the knowledge available to one of ordinary skill in the art as the same technical field of polymeric films are provided by the references of record, motivation exists and a proper *prima face* case was established. The 103 is therefore upheld.

In conclusion, Applicant has not provided any objective evidence such as comparative tests or data to convince the Examiner to withdraw the rejections over the applied prior art. The rejections are sustained for reasons set forth above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- WO 01/53391A1 to Murschall will be translated in full for application to the next Office Action if needed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is 571-272-1519. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays.

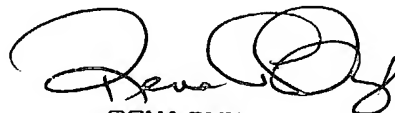
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tamra L. Dicus
Examiner
Art Unit 1774

July 7, 2004


Supervisory **RENA DYE**
PRIMARY EXAMINER
A.U. 1774